

CLAIMS

What is claimed is:

1. A system to support multimedia content browsing on small mobile devices, comprising:
 - a multimedia content database;
 - a processing component capable of:
 - searching and retrieving one or more multimedia contents from the multimedia content database; and
 - transmitting the one or more multimedia contents to a browsing component over a communication network; and
 - said browsing component capable of:
 - rendering the one or more multimedia contents on one or more layers on the browsing component, wherein each of the one or more layers can have a transparency value; and
 - setting the transparency value of each of the one or more layers independently, interactively, and continuously via one or more input devices.
2. The system according to claim 1, wherein:
 - the multimedia content database can reside on at least one of: an external hard disk drive (HDD), a portable HDD, a wireless HDD, a Bluetooth HDD, and an internal HDD on a resource-rich computing device.
3. The system according to claim 1, wherein:
 - a multimedia content of the one or more multimedia contents can include: a video, a video segment, a keyframe, an image, a figure, a drawing, a graph, a picture, a text, and a keyword.

4. The system according to claim 1, wherein:
 - a multimedia content of the one or more multimedia contents comprises one or more segments, wherein the multimedia content and/or each of the one or more segments can be associated with and retrieved by a keyword.
5. The system according to claim 4, further comprising:
 - a graphical representation of at least one of:
 - the one or more segments composing the multimedia content;
 - the associated keyword of each of the one or more segments; and
 - the relevance number of each of the one or more segments.
6. The system according to claim 4, wherein:
 - the multimedia content can include one or more segments from one or more source multimedia contents.
7. The system according to claim 6, further comprising:
 - a graphical representation of the source multimedia content of each of the one or more segments composing the multimedia content.
8. The system according to claim 1, wherein:
 - the processing component can be one of: a laptop PC, a desktop PC, a server, a workstation, and a mainframe computer.
9. The system according to claim 1, wherein:
 - the communication network can be one of: Internet, an intranet, a local area network, a wireless network, and a Bluetooth network.
10. The system according to claim 1, wherein:
 - The processing component is further capable of searching the multimedia content database via one or more searching criteria, wherein a searching criterion of the one or more searching criteria can be one of: a keyword and a timestamp.

11. The system according to claim 1, wherein:

the processing component is further capable of:

composing and/or animating the contents of two or more of the one or more layers using the transparency values of the two or more layers; and
saving the composed content in the multimedia content database and/or
transmitting the composed content to the browsing component.

12. The system according to claim 1, wherein:

the browsing component can be one of: a PDA, a cell phone, a Tablet PC, a Pocket PC, and a small mobile device.

13. The system according to claim 1, wherein:

The browsing component is further capable of performing on the one or more multimedia contents at least one of:

querying the one or more multimedia contents by a keyword;
exploring the one or more multimedia contents by viewing a keyframe of the one or more multimedia contents; and
playing a stream of the one or more multimedia contents.

14. The system according to claim 1, wherein:

a layer in the one or more layers can be a content layer or a widget layer.

15. The system according to claim 14, wherein:

the content of the content layer can be at least one of:

a list of titles of the one or more multimedia contents, which can be ordered by their relevance numbers based on the number of appearances of a keyword;
an un-composed and/or composed content of the one or more multimedia contents; and
a stream of the one or more multimedia contents.

16. The system according to claim 14, wherein:
the widget layer is capable of adjusting interactively the transparency value of each of the one or more layers via the one or more input devices.
17. The system according to claim 1, wherein:
the one or more layers can overlap and be rendered on top of each other.
18. The system according to claim 1, wherein:
an input device in the one or more input devices can be one of: a pen, and a stylus.
19. A method to support multimedia content browsing on small mobile devices, comprising:
searching and retrieving one or more multimedia contents from a multimedia content database;
transmitting the one or more multimedia contents over a communication network;
rendering the one or more multimedia contents on one or more layers, wherein each of the one or more layers can have a transparency value; and
setting the transparency value of each of the one or more layers independently, interactively, and continuously via one or more input devices.
20. The method according to claim 19, further comprising at least one of:
segmenting a multimedia content of the one or more multimedia contents into one or more segments; and
associating and retrieving the multimedia content and/or each of the one or more segments with a keyword.
21. The method according to claim 20, further comprising:
composing the multimedia content with one or more segments from one or more source multimedia contents.

22. The method according to claim 19, further comprising:
composing and/or animating the contents of two or more of the one or more layers
using the transparency values of the two or more layers; and
storing the composed content in the multimedia content database and/or
transmitting the composed content for rendering.
23. The method according to claim 19, further comprising:
querying the one or more multimedia contents by a keyword;
exploring the one or more multimedia contents by viewing a keyframe of the one
or more multimedia contents; and
playing a stream of the one or more multimedia contents.
24. The method according to claim 19, further comprising:
rendering on a layer in the one or more layers the content of at least one of:
a list of titles of the one or more multimedia contents, which can be ordered
by their relevance numbers based on the number of appearances of a keyword;
an un-composed and/or composed content of the one or more multimedia
contents; and
a stream of the one or more multimedia contents.
25. The method according to claim 19, further comprising:
rendering the one or more layers on top of each other.
26. The method according to claim 19, further comprising:
adjusting interactively the transparency value of each of the one or more layers
via the one or more input devices.
27. The method according to claim 25, further comprising:
adjusting the transparency value of one of the one or more layers in the X
direction by the one or more input devices.

28. The method according to claim 25, further comprising:
adjusting the transparency value of one of the one or more layers in the Y
direction by the one or more input devices.
29. A machine readable medium having instructions stored thereon that when executed
cause a system to:
search and retrieve one or more multimedia contents from a multimedia content
database;
transmit the one or more multimedia contents over a communication network;
render the one or more multimedia contents on one or more layers, wherein each
of the one or more layers can have a transparency value; and
set the transparency value of each of the one or more layers independently,
interactively, and continuously via one or more input devices.
30. The machine readable medium of claim 29, further comprising instructions that when
executed cause the system to:
segment a multimedia content of the one or more multimedia contents into one or
more segments; and
associate and retrieve the multimedia content and/or each of the one or more
segments with a keyword.
31. The machine readable medium of claim 30, further comprising instructions that when
executed cause the system to:
compose the multimedia content with one or more segments from one or more
source multimedia contents.
32. The machine readable medium of claim 29, further comprising instructions that when
executed cause the system to:
compose and/or animate the contents of two or more of the one or more layers
using the transparency values of the two or more layers; and

store the composed content in the multimedia content database and/or transmit the composed content for rendering.

33. The machine readable medium of claim 29, further comprising instructions that when executed cause the system to:
- query the one or more multimedia contents by a keyword;
 - explore the one or more multimedia contents by viewing a keyframe of the one or more multimedia contents; and
 - play a stream of the one or more multimedia contents.
34. The machine readable medium of claim 29, further comprising instructions that when executed cause the system to:
- render on a layer in the one or more layers the content of at least one of:
 - a list of titles of the one or more multimedia contents, which can be ordered by their relevance numbers based on the number of appearances of a keyword;
 - an un-composed and/or composed content of the one or more multimedia contents; and
 - a stream of the one or more multimedia contents.
35. The machine readable medium of claim 29, further comprising instructions that when executed cause the system to:
- adjust interactively the transparency value of each of the one or more layers via the one or more input devices.
36. The machine readable medium of claim 29, further comprising instructions that when executed cause the system to:
- render the one or more layers on top of each other.
37. A system to support multimedia content browsing on small mobile devices, comprising:

means for searching and retrieving one or more multimedia contents from a multimedia content database;

means for transmitting the one or more multimedia contents over a communication network;

means for rendering the one or more multimedia contents on one or more layers, wherein each of the one or more layers can have a transparency value; and

means for setting the transparency value of each of the one or more layers independently, interactively, and continuously via one or more input devices.

38. A computer data signal embodied in a transmission medium, comprising:

a code segment including instructions to search and retrieve one or more multimedia contents from a multimedia content database;

a code segment including instructions to transmit the one or more multimedia contents over a communication network;

a code segment including instructions to render the one or more multimedia contents on one or more layers, wherein each of the one or more layers can have a transparency value; and

a code segment including instructions to set the transparency value of each of the one or more layers independently, interactively, and continuously via one or more input devices.